



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0216; Directorate Identifier 2010-SW-025-AD]

RIN 2120-AA64

Airworthiness Directives; Sikorsky Aircraft Corporation Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for Sikorsky Aircraft Corporation (Sikorsky) Model S-92A helicopters, which requires inspecting the tail rotor (T/R) pylon for a loose or missing fastener, a crack, damage, or corrosion and adding an internal doubler to the aft shear deck tunnel assembly. This proposed AD is prompted by the discovery of cracks in T/R pylons. The proposed actions are intended to detect a loose or missing fastener, a crack, damage, or corrosion on the T/R pylon and, if present, to repair the T/R Pylon and install a doubler on the aft shear deck tunnel assembly or to replace the T/R pylon and install the doubler on the aft shear deck tunnel assembly to prevent failure of the T/R pylon or other T/R components, and subsequent loss of control of the helicopter.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- **Federal eRulemaking Docket:** Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.

- **Fax:** 202-493-2251.

- **Mail:** Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- **Hand Delivery:** Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

EXAMINING THE AD DOCKET: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed AD, contact Sikorsky Aircraft Corporation, Attn: Manager, Commercial Technical Support, mailstop s581a, 6900 Main Street, Stratford, CT 06614; telephone (800) 562-4409; email tsslibrary@sikorsky.com; or at <http://www.sikorsky.com>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, TX 76137.

FOR FURTHER INFORMATION CONTACT: Nicholas Faust, Aviation Safety Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; telephone (781) 238-7763; email nicholas.faust@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

Discussion

We propose to adopt a new AD for Sikorsky Model S-92A helicopters with a T/R pylon, part number (P/N) 92000-06102-041. This proposal is prompted by the discovery of cracks in the forward lower spar region of T/R pylons installed on Sikorsky Model S-92A helicopters. The T/R pylon supports the T/R and the horizontal stabilizer, and a crack in a T/R pylon could alter vibration characteristics of the T/R pylon, which could adversely affect fatigue lives of T/R components. This condition, if not corrected, could result in failure of the T/R pylon or other T/R components and subsequent loss of control of the helicopter.

FAA's Determination

We are proposing this AD because we evaluated all known relevant information and determined that an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Related Service Information

We have reviewed Sikorsky Alert Service Bulletin (ASB) No. 92-53-001, dated June 23, 2008 (ASB No. 92-53-001), and ASB No. 92-53-004B, Revision B, dated June 21, 2011 (ASB No. 92-53-004B). ASB No. 92-53-001 specifies for a T/R pylon with more than 500 flight-hours a one-time inspection of the T/R pylon "components and structure for obvious damage, cracks, corrosion, and security." ASB No. 92-53-004B specifies a one-time replacement of the T/R pylon, P/N 92000-06102-041, with T/R pylon, P/N 92070-20058-042, and installation of a doubler on the aft shear deck tunnel assembly. The ASB specifies a replacement schedule based on the T/R pylon's hours for specified serial numbered helicopters.

Proposed AD Requirements

This proposed AD would require compliance with specified portions of the manufacturer's alert service bulletins. This proposal would require, for helicopters with 500 or more hours time-in-service (TIS), within 25 hours TIS and thereafter at intervals not to exceed 10 hours TIS, inspecting the T/R pylon for a crack, damage, corrosion, or loose or missing fasteners. If a crack or an area of damage or corrosion is found or if there is a loose or missing fastener, before further flight, this proposed AD would require repairing the crack, damage, or corrosion, and replacing any loose or missing fastener and installing a doubler, P/N 92070-20087-101, on the aft shear deck tunnel assembly; or replacing the T/R pylon, P/N 92000-06102-041, with an airworthy T/R pylon, P/N 92070-20058-042, and installing a doubler, P/N 92070-20087-101, on the aft shear deck tunnel assembly. If there is no crack in the T/R pylon, this proposed AD would require replacing the T/R pylon, P/N 92000-06102-041, with an airworthy T/R pylon, P/N 92070-20058-042, and adding a doubler, P/N 92070-20087-101, on the aft shear deck tunnel assembly, according to the following compliance schedule:

- For a T/R pylon with 3,750 or more hours TIS, within 12 months;
- For a T/R pylon with 1,500 through 3,749 hours TIS, within 24 months; and
- For a T/R pylon with 1,499 or less hours TIS, within 36 months.

Replacing the T/R pylon, P/N 92000-06102-041, with an airworthy T/R pylon, P/N 92070-20058-042, and installing doubler, P/N 92070-20087-101, on the aft shear deck tunnel assembly, would constitute terminating action for the requirements of this AD.

Costs of Compliance

We estimate that this proposed AD would affect 20 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD. It would take approximately 1 work-hour per helicopter to inspect and 120 work-hours per helicopter to replace the T/R pylon and install the doubler. The average labor rate is \$85 per work-hour and required parts would cost approximately \$339,080 per helicopter. Based on these figures, we estimate the total cost impact of the proposed AD per helicopter to be \$356,505, and the total cost on U.S. operators to be \$7,130,100, assuming 85 inspections per year are performed on each helicopter and assuming replacement of the T/R pylon and installing the doubler on each helicopter.

According to the Sikorsky service information, some of the costs of this proposed AD may be covered under warranty thereby reducing the cost impact on affected individuals. We do not control warranty coverage. Accordingly, we have included all costs in our cost estimate.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds

necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by Reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

SIKORSKY AIRCRAFT CORPORATION: Docket No. FAA-2012-0216;

Directorate Identifier 2010-SW-025-AD.

(a) Applicability.

This AD applies to Sikorsky Aircraft Corporation (Sikorsky) Model S-92A helicopters, with a tail rotor (T/R) pylon, part number (P/N) 92000-06102-041, certificated in any category.

(b) Unsafe Condition.

This AD defines the unsafe condition as a loose or missing fastener, a crack, damage, or corrosion on the T/R pylon that could result in failure of the T/R pylon or other T/R components, and subsequent loss of control of the helicopter.

(c) Compliance.

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(d) Required Actions.

(1) For helicopters with 500 or more hours time-in-service (TIS), within 25 hours TIS and thereafter at intervals not to exceed 10 hours TIS, inspect each T/R pylon for a crack, damage, corrosion, or a loose or missing fastener in accordance with the Accomplishment Instructions, paragraph 3.A.(4)(a) through paragraph 3.A.(4)(f), and referring to Figure 1 of Sikorsky Alert Service Bulletin (ASB) No. 92-53-001, dated June 23, 2008, except you are not required to contact Sikorsky Customer Service Engineering per paragraph 3.A.(4)(c)1 of ASB 92-53-001, dated June 23, 2008.

(2) If there is a crack, damage, corrosion, or a loose or missing fastener, before further flight, either:

(i) If within allowable tolerances, repair each crack and each area of damage or corrosion and replace any loose or missing fastener; or

(ii) Replace the T/R pylon, (P/N) 92000-06102-041, with T/R pylon, P/N 92070-20058-042, as follows:

(A) Conduct the Total Indicated Run-out procedure on the No. 4 and No. 5 T/R drive shafts and remove the T/R pylon; and

(B) Install the doubler, P/N 92070-20087-101, as follows:

(1) For helicopters, serial numbers (S/Ns) 920006 through 920082, on the aft shear deck tunnel assembly, P/N 92204-05103-041 or -045, in accordance with the Accomplishment Instructions, paragraph 3.B.(1) through 3.B.(30) and while referring to Figures 1, 2, and 4 of Sikorsky ASB No. 92-53-004B, Revision B, dated June 21, 2011 (92-53-004B).

(2) For helicopters, S/Ns 920083 through 920124, on the aft shear deck tunnel assembly, P/N 92204-05103-043, in accordance with the Accomplishment Instructions, paragraph 3.C.(1) through 3.C.(21) and referring to Figures 3 and 4 of ASB 92-53-004B.

(3) If there is no crack in the T/R pylon, replace T/R pylon, P/N 92000-06102-041, with T/R pylon, P/N 92070-20058-042, and install doubler, P/N 92070-20087-101, on the aft shear deck tunnel assembly as specified in paragraphs (2)(ii)(A) through (2)(ii)(B) of this AD, according to the following:

(i) For a T/R pylon with 3,750 or more hours TIS, replace and install doubler within 12 months.

(ii) For a T/R pylon with 1,500 through 3,749 hours TIS, replace and install doubler within 24 months.

(iii) For a T/R pylon with 1,499 or less hours TIS, replace and install doubler within 36 months.

(4) Replacing T/R pylon, P/N 92000-06102-041, with T/R pylon, P/N 92070-20058-042, and installing internal tail cone doubler, P/N 92070-20087-101, on the aft shear deck tunnel assembly, constitutes terminating action for the requirements of this AD.

(e) Alternative Methods of Compliance (AMOC).

(1) The Manager, Boston Aircraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Nicholas Faust, Aviation Safety Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; telephone (781) 238-7763; email nicholas.faust@faa.gov.

(2) For operations conducted under a Part 119 operating certificate or under Part 91, Subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

(f) Additional Information.

For service information identified in this AD, contact Sikorsky Aircraft Corporation, Attn: Manager, Commercial Technical Support, mailstop s581a, 6900 Main Street, Stratford, CT 06614; telephone (800) 562-4409; email tsslibrary@sikorsky.com; or at <http://www.sikorsky.com>. You may review this service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, TX 76137.

(g) Subject.

Joint Aircraft Service Component (JASC) Code: 5340, Fuselage Main, Attach Fittings.

Issued in Fort Worth, Texas, on May 2, 2012.

Carlton N. Cochran,

Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.

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